

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-3 (Cancelled).

Claim 4 (Currently Amended): The process as claimed in claim 1 ~~36~~, wherein ~~the~~ at least one of the at least two organofunctional groups of the silicon compound A is a linear, branched or cyclic alkyl group having from 1 to 20 carbon atoms and may optionally be substituted with a halogen or an alkenyl group having from 2 to 16 carbon atoms.

Claim 5 (Currently Amended): The process as claimed in claim 1 ~~36~~, wherein ~~the~~ at least one of the at least two organofunctional groups of silicon compound A is reacted with the surface of the organofunctional substrate by the addition of an acid or base; in the presence of a solvent; and in the presence of a at least one free radical generator ~~or combinations thereof~~.

Claim 6 (Currently Amended): The process as claimed in claim 5, wherein the acid or base is selected from the group consisting of ~~HCl~~ HCl, HNO₃, HCOOH, CH₃OOOH, H₃PO₄, H₂SO₄, an amine, Na₂CO₃, NaOH, NH₄Cl, CH₃COONa, and CH₃COONH₄.

Claim 7 (Previously Presented): The process as claimed in claim 5, wherein said free radical generator is selected from the group consisting of di-tert-butyl peroxide, dicumyl peroxide, or di-benzoyl peroxide.

Claim 8 (Currently Amended): The process as claimed in claim 1 36, wherein a method used to apply the silicon compound B is spraying, dipping, drenching, brushing, polishing, rolling, doctoring, CVD, or PVD.

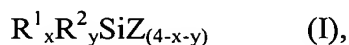
Claim 9 (Currently Amended): The process as claimed in claim 1 36, further comprising heat treating the organofunctional substrate after reacting the organofunctional group of the silicon compound A with the surface of the organofunctional substrate, after applying the organofunctional silicon compound B to the polar treated surface or both.

Claim 10 (Currently Amended): The process as claimed in claim 1 36, wherein the organofunctional substrate is heat treated from 80 to 120°C for from 0.5 to 2 hours after reacting the organofunctional group of the silicon compound A with the surface of the organofunctional substrate.

Claim 11 (Currently Amended): The process as claimed in claim 1 36, wherein the organofunctional substrate is heated from 100 to 200°C for from 0.5 to 2 hours after applying the organofunctional silicon compound B to the polar treated surface.

Claim 12 (Currently Amended): The process as claimed in claim 1 36, further comprising precleaning the organofunctional substrate by treating said organofunctional substrate with at least one acidic aqueous solution, basic aqueous solution, acid alcoholic solution or basic alcoholic solution.

Claim 13 (Currently Amended): The process as claimed in claim + 36, wherein one or both of the silicon compounds A and B is an organosilane of the general formula I



wherein the groups R^1 and R^2 are identical or different, and each is a at least one linear, branched, or cyclic alkyl group having from 1 to 20 carbon atoms, ~~or~~ a ω -chloroalkyl, ω -bromoalkyl, ω -iodoalkyl, ω -azidoalkyl, ω -cyanoalkyl, ω -cyanatoalkyl, ω -isocyanatoalkyl, fluoroalkyl, perfluoroalkyl, alkenyl, aryl, ω -acryloxyalkyl, ω -methacryloxy alkyl, sulfane, ω -mercaptoalkyl, sulfoxyalkyl, ω -thiocyanatoalkyl, ω -glycidyoxyalkyl, epoxy alkyl, alkenyloxyalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, carbonatoalkyl or a ureidoalkyl group, where each alkylene or alkenyl group contains from 1 to 6 carbon atoms, Z is a chloro, a methoxy, ethoxy, isopropoxy, 2-methoxyethoxy or acetoxo group, and x is 1, 2, or 3, and y is 0, 1, or 2, and $(x+y) \leq 3$, or an organosiloxane based on at least one organosilane of the general formula I ~~mixtures thereof~~.

Claim 14 (Currently Amended): The process as claimed in claim + 36, wherein one or both of silicon compounds A and B is present in monomeric, oligomeric, cocondensed, dissolved, emulsified, or suspended form.

Claim 15 (Currently Amended): The process as claimed in claim + 36, wherein the organofunctional substrate comprises a plastic, a ~~composition~~ fiber or a natural substance.

Claim 16 (Currently Amended): The process as claimed in claim + 36, wherein the organofunctional substrate is selected from the group consisting of polyethylene, polypropylene, polyamide, polyester, polyacrylate, polyurethane, polystyrene, polycarbonate,

polyvinyl chloride, polyethylene terephthalate, silicone, melamine resin, carbon fiber, furan resin, alkyd resin, bismaleimidetriazine resin, ethylene-vinyl acetate copolymer, acrylonitrile-butadiene-styrene copolymer, wood and rubber.

Claim 17 (Currently Amended): A surface-modified substrate produced by the process as claimed in claim + 36.

Claim 18 (Currently Amended): A product comprising a surface-modified substrate produced by the process as claimed in claim + 36.

Claim 19 (Currently Amended): A process for repelling water, oil, dirt, dust, paint, microorganisms or bacteria comprising incorporating a substrate obtained by the process as claimed in claim + 36 as a coating on an article.

Claim 20 (Previously Presented): A process for modifying the surface of an organofunctional substrate comprising reacting an organofunctional group of a silicon compound A with the surface of an organofunctional substrate to form a polar treated surface, wherein the silicon compound A comprises at least one organofunctional group and at least one chloro, alkoxy, carboxy or hydroxyl group, and further wherein said silicon compound A may react to form a polymer bearing silyl groups, then applying to the polar treated surface an organofunctional silicon compound B, wherein the silicon compounds A and B may be identical or different, the silicon compound B bears at least one chloro, alkoxy, carboxy or hydroxyl group, and the silicon compound B reacts with the polar treated surface,

wherein the organofunctional group of silicon compound A is reacted with the surface of the organofunctional substrate by the addition of an acid or base and in the presence of a free radical generator or a free radical generator and a solvent.

Claim 21 (Previously Presented): The process as claimed in claim 20, wherein the organofunctional group of the silicon compound A is a linear, branched or cyclic alkyl group having from 1 to 20 carbon atoms and may optionally be substituted with a halogen or an alkenyl group having from 2 to 16 carbon atoms.

Claim 22 (Currently Amended): The process as claimed in claim 20, wherein the acid or base is selected from the group consisting of ~~HCl~~, HCl, HNO₃, HCOOH, CH₃COOH, H₃PO₄, H₂SO₄, an amine, Na₂CO₃, NaOH, NH₄Cl, CH₃COONa, and CH₃COONH₄.

Claim 23 (Previously Presented): The process as claimed in claim 20, wherein said free radical generator is selected from the group consisting of di-tert-butyl peroxide, dicumyl peroxide, or di-benzoyl peroxide.

Claim 24 (Previously Presented): The process as claimed in claim 20, wherein a method used to apply the silicon compound B is spraying, dipping, drenching, brushing, polishing, rolling, doctoring, CVD or PVD.

Claim 25 (Previously Presented): The process as claimed in claim 20, further comprising heat treating the organofunctional substrate after reacting the organofunctional

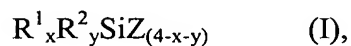
group of the silicon compound A with the surface of the organofunctional substrate, after applying the organofunctional silicon compound B to the polar treated surface or both.

Claim 26 (Previously Presented): The process as claimed in claim 20, wherein the organofunctional substrate is heat treated from 80 to 120°C for from 0.5 to 2 hours after reacting the organofunctional group of the silicon compound A with the surface of the organofunctional substrate.

Claim 27 (Previously Presented): The process as claimed in claim 20, wherein the organofunctional substrate is heated from 100 to 200°C for from 0.5 to 2 hours after applying the organofunctional silicon compound B to the polar treated surface.

Claim 28 (Previously Presented): The process as claimed in claim 20, further comprising precleaning the organofunctional substrate by treating said organofunctional substrate with at least one acidic aqueous solution, basic aqueous solution, acid alcoholic solution or basic alcoholic solution.

Claim 29 (Currently Amended): The process as claimed in claim 20, wherein one or both of the silicon compounds A and B is an organosilane of the general formula I



wherein the groups R^1 and R^2 are identical or different, and each is a at least one linear, branched, or cyclic alkyl group having from 1 to 20 carbon atoms, a ω -chloroalkyl, ω -bromoalkyl, ω -iodoalkyl, ω -azidoalkyl, ω -cyanoalkyl, ω -cyanatoalkyl, ω -isocyanatoalkyl, fluoroalkyl, perfluoroalkyl, alkenyl, aryl, ω -acryloxyalkyl, ω -methacryloxy alkyl, sulfane, ω -

mercaptoalkyl, sulfoxyalkyl, ω -thiocyanatoalkyl, ω -glycidyoxyalkyl, epoxy alkyl, alkenyloxyalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, carbonatoalkyl, ~~or~~ a ureidoalkyl group, where each alkylene group contains from 1 to 6 carbon atoms, Z is a chloro, a methoxy, ethoxy, isopropoxy, 2-methoxyethoxy or acetoxy group, and x is 1, 2, or 3, and y is 0, 1, or 2, and $(x+y) \leq 3$, or an organosiloxane based on at least one organosilane of the general formula I, ~~or mixtures thereof.~~

Claim 30 (Previously Presented): The process as claimed in claim 20, wherein one or both of silicon compounds A and B is present in monomeric, oligomeric, cocondensed, dissolved, emulsified, or suspended form.

Claim 31 (Currently Amended): The process as claimed in claim 20, wherein the organofunctional substrate comprises a plastic, a ~~composition~~ fiber or a natural substance.

Claim 32 (Previously Presented): The process as claimed in claim 20, wherein the organofunctional substrate is selected from the group consisting of polyethylene, polypropylene, polyamide, polyester, polyacrylate, polyurethane, polystyrene, polycarbonate, polyvinyl chloride, polyethylene terephthalate, silicone, melamine resin, carbon fiber, furan resin, alkyd resin, bismaleimidetriazine resin, ethylene-vinyl acetate copolymer, acrylonitrile-butadiene-styrene copolymer, wood and rubber.

Claims 33-35 (Canceled).

Claim 36 (New): A process for modifying the surface of an organofunctional substrate comprising the steps of:

a) applying a silicon compound A to the surface of an organofunctional substrate, wherein said silicon compound A comprises at least two organofunctional groups, and comprises at least one hydrolyzable group selected from the group consisting of chloro, alkoxy, carboxy, and hydroxyl; wherein at least one of the organofunctional groups is capable of undergoing a crosslinking reaction upon exposure to UV radiation, and wherein the silicon compound A is capable of forming a polymer bearing a silyl group,

b) reacting an organofunctional group of the silicon compound A with the surface an organofunctional substrate to form a polar treated surface,

c) exposing the polar treated surface to UV radiation to initiate crosslinking between the at least one of the organofunctional groups of the silicon compound A capable of undergoing a crosslinking reaction upon exposure to UV radiation,

d) applying a silicon compound B to the polar treated surface, said silicon compound B comprising at least one organofunctional group and at last one hydrolyzable group selected from the group consisting of chloro, alkoxy, carboxy, and hydroxyl; wherein the silicon compound B may be the same or different from the silicon compound A,

e) reacting the silicon compound B with the polar treated surface.